LIST OF CLAIMS / AMENDMENTS

Claims 4, 14-25, 29, and 39-50 were previously withdrawn.

No claims are amended.

Claims 1-3, 5-13, 26-28, 30-38, and 51-60 are pending as follows:

1. (previously presented) A hybrid actuator for actuating a component, comprising:

a first actuator adapted to be coupled to the component and to move the component a first actuation distance;

a second actuator adapted to be coupled to the component and to move the component a second actuation distance; and

a linkage connected to the first actuator and connected to the second actuator, the linkage adapted to combine the first actuation distance and the second actuation distance and to move the component a third actuation distance.

2. (original) The hybrid actuator of Claim 1, wherein:

the first actuator includes a hydraulic piston.

3. (original) The hybrid actuator of Claim 1, wherein:

the second actuator includes a piezo-electric actuator.

4. (withdrawn) The hybrid actuator of Claim 3, wherein:

the second actuator includes an x-frame actuator.

5. (original) The hybrid actuator of Claim 3, wherein:

the second actuator includes a piezo-electric cylinder actuator.

6. (original) The hybrid actuator of Claim 1, wherein:

the linkage includes a pushrod attached between the first actuator and the second actuator.

7. (original) The hybrid actuator of Claim 1, wherein:

the linkage includes a mount attached to the second actuator adapted to hold the first actuator and move the first actuator the second actuation distance.

8. (original) The hybrid actuator of Claim 1, wherein:

the third actuation distance includes at least one of adding the second actuation distance to the first actuation distance and subtracting the second actuation distance from the first actuation distance.

9. (original) The hybrid actuator of Claim 1, wherein:

the first actuator is adapted to move the component within a first range of frequencies; and

the second actuator is adapted to move the component within a second range of frequencies, the second range of frequencies being substantially higher than the first range of frequencies.

10. (original) The hybrid actuator of Claim 9, wherein the first range of frequencies is less than or equal to approximately 25 cycles per second, and the second range of frequencies is greater than or equal to approximately 40 cycles per second.

11. (original) The hybrid actuator of Claim 1, wherein:

the second actuator includes a clevis adapted to join a pushrod to the component.

12. (original) The hybrid actuator of Claim 1, wherein:

the first actuator is activated at a frequency between 0 and 25 cycles per second.

13. (original) The hybrid actuator of Claim 1, wherein:

the second actuator is activated at a frequency between 40 and 200 cycles per second.

14. (withdrawn) A method for providing hybrid actuation, comprising:

providing a first actuator capable of providing a first actuation output movement;

providing a second actuator capable of providing a second actuation output movement;

combining the first actuation output movement with the second actuation output movement producing a hybrid actuation movement;

activating the first actuator; and

activating the second actuator.

15. (withdrawn) The method of Claim 14, wherein:

providing the first actuator includes providing a hydraulic piston.

16. (withdrawn) The method of Claim 14, wherein:

providing the second actuator includes providing a piezo-electric actuator.

17. (withdrawn) The method of Claim 16, wherein:

the piezo-electric actuator includes an x-frame actuator.

18. (withdrawn) The method of Claim 16, wherein:

the piezo-electric actuator includes a piezo-electric cylinder actuator.

19. (withdrawn) The method of Claim 14, wherein:

combining the first actuation output movement with the second actuation output movement includes linking a pushrod between the first actuator and the second actuator.

20. (withdrawn) The method of Claim 14, wherein:

combining the first actuation output movement with the second actuation output movement includes mounting the first actuator to the second actuator.

21. (withdrawn) The method of Claim 14, wherein:

combining the first actuation output movement with the second actuation output movement includes at least one of adding the second actuation output movement to the first actuation output movement and subtracting the second actuation output movement from the first actuation output movement.

22. (withdrawn) The method of Claim 14, wherein:

activating the first actuator includes activating at a frequency between 0 and 25 cycles per second.

23. (withdrawn) The method of Claim 14, wherein:

activating the second actuator includes activating at a frequency between 40 and 200 cycles per second.

24. (withdrawn) The method of Claim 14, wherein:

providing a first actuator includes providing a first actuator adapted to be driven within a first range of frequencies; and

providing a second actuator includes providing a second actuator adapted to be driven within a second range of frequencies, the second range of frequencies being substantially higher than the first range of frequencies.

25. (withdrawn) The method of Claim 24, wherein the first range of frequencies is less than or equal to approximately 25 cycles per second, and the second range of frequencies is greater than or equal to approximately 40 cycles per second.

26. (previously presented) A system for suppressing undesired movement of a component, comprising:

at least one motion sensor adapted to monitor the component;

a processor linked to the at least one motion sensor, the processor adapted to accept an input from the at least one motion sensor, and to control a plurality of actuators responsive to the input from the at least one motion sensor;

a first actuator controlled by the processor, the first actuator connected to the component, the first actuator adapted to move a first actuation distance at a first range of frequencies;

a second actuator controlled by the processor, the second actuator connected to the component, the second actuator adapted to move a second actuation distance at a second range of frequencies; and

a linkage connected to the first actuator and connected to the second actuator, the linkage adapted to combine the first actuation distance and the second actuation distance thereby moving the component a third actuation distance.

27. (original) The system of Claim 26, wherein:

the first actuator includes a hydraulic piston.

28. (original) The system of Claim 26, wherein:

the second actuator includes a piezo-electric actuator.

29. (withdrawn) The system of Claim 28, wherein:

the second actuator includes an x-frame actuator.

30. (original) The system of Claim 28, wherein:

the second actuator includes a piezo-electric cylinder actuator.

31. (original) The system of Claim 26, wherein:

the linkage includes a pushrod attached between the first actuator and the second actuator.

32. (original) The system of Claim 26, wherein:

the linkage includes a mount attached to the second actuator adapted to hold the first actuator and move the first actuator the second actuation distance.

33. (original) The system of Claim 26, wherein:

the third actuation distance includes at least one of adding the second actuation distance to the first actuation distance and subtracting the second actuation distance from the first actuation distance.

34. (previously presented) The system of Claim 26, wherein:

the component includes at least one of an aircraft rudder, an aircraft stabilizer, and an aircraft control surface.

35. (original) The system of Claim 26, wherein:

the first actuator is activated at a frequency between 0 and 25 cycles per second.

36. (original) The system of Claim 26, wherein:

the second actuator is activated at a frequency between 40 and 200 cycles per second.

37. (previously presented) The system of Claim 26, wherein the at least one motion sensor includes an accelerometer.

38. (original) The system of Claim 26, wherein the second range of frequencies is substantially higher than the first range of frequencies.

39. (withdrawn) A method for providing motion reduction, comprising:

sensing a motion and outputting an indication of motion;

processing the indication of motion and outputting a control response in opposition to the motion;

providing a first actuator adapted to receive the control response;

providing a second actuator adapted to receive the control response;

combining the first actuation movement with the second actuation movement producing a hybrid actuation movement in opposition to the motion;

activating the first actuator in opposition to the motion; and

activating the second actuator in opposition to the motion.

40. (withdrawn) The method of Claim 39, wherein:

providing the first actuator includes providing a hydraulic piston.

41. (withdrawn) The method of Claim 39, wherein:

providing the second actuator includes providing a piezo-electric actuator.

42. (withdrawn) The method of Claim 39, wherein:

combining the first actuation movement with the second actuation movement includes linking a pushrod between the first actuator and the second actuator.

43. (withdrawn) The method of Claim 39, wherein:

combining the first actuation movement with the second actuation movement includes mounting the first actuator to the second actuator.

44. (withdrawn) The method of Claim 39, wherein:

combining the first actuation movement with the second actuation movement includes at least one of adding the second actuation movement to the first actuation movement and subtracting the second actuation movement from the first actuation movement.

45. (withdrawn) The method of Claim 39, wherein:

activating the first actuator includes activating at a frequency between 0 and 25 cycles per second.

46. (withdrawn) The method of Claim 39, wherein:

activating the second actuator includes activating at a frequency between 40 and 200 cycles per second.

47. (withdrawn) The method of Claim 39, wherein:

sensing a motion includes sensing a deflection of a component.

48. (withdrawn) The method of Claim 39, wherein:

sensing a motion includes determining an acceleration.

49. (withdrawn) The method of Claim 39, further comprising:

deflecting a control surface utilizing the hybrid actuation distance.

50. (withdrawn) The hybrid actuator of Claim 39, wherein:

the motion includes at least one of vibration and buffeting of an aircraft component.

51. (previously presented) An aircraft with hybrid motion suppression, comprising:

a fuselage including an appendage;

at least one motion sensor adapted to sense motion of the appendage;

a processor linked to the at least one motion sensor, the processor adapted to accept an input from the at least one motion sensor, and to provide at least one output signal responsive to the input from the at least one motion sensor;

a first actuator controlled by the processor, the first actuator connected to the appendage, the first actuator adapted to receive the at least one output signal and to move a first actuation distance to oppose the undesired movement at a first range of frequencies;

a second actuator controlled by the processor, the second actuator connected to the appendage, the second actuator adapted to receive the at least one output signal and to move a second actuation distance to oppose the undesired movement at a second range of frequencies; and

a linkage connected to the first actuator and connected to the second actuator, the linkage adapted to combine the first actuation distance and the second actuation distance thereby moving at least a portion of the appendage a third actuation distance in opposition to the undesired movement.

52. (original) The aircraft of Claim 51, wherein:

the first actuator includes a hydraulic piston.

53. (original) The aircraft of Claim 51, wherein:

the second actuator includes a piezo-electric actuator.

54. (original) The aircraft of Claim 51, wherein:

the linkage includes a pushrod attached between the first actuator and the second actuator.

55. (original) The aircraft of Claim 51, wherein:

the linkage includes a mount attached to the second actuator adapted to hold the first actuator and move the first actuator the second actuation distance.

56. (original) The aircraft of Claim 51, wherein:

the third actuation distance includes at least one of adding the second actuation distance to the first actuation distance and subtracting the second actuation distance from the first actuation distance.

57. (original) The aircraft of Claim 51, wherein:

the first actuator is activated at a frequency between 0 and 25 cycles per second.

58. (original) The aircraft of Claim 51, wherein:

the second actuator is activated at a frequency between 40 and 200 cycles per second.

59. (previously presented) The aircraft of Claim 51, wherein:

the at least one motion sensor includes an accelerometer.

60. (original) The aircraft of Claim 51, wherein:

the portion of the appendage includes a control surface movably included in the appendage.